**EO 208-Bio Fuels**

**Lake Area Tech (Spring 2018)**

**Instructor:** Scott Leitheiser

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Office Hours: By appointment

**Duration: 3.0 credits (Clock Hours: 84)**

**Rationale and Course Goals: The objective of this course is to study the design, operation, equipment, biologics, and process flows of ethanol plants and biofuel facilities.**

**Class Format:**

The method of delivery for Ethanol and Biofuels Production will be hybrid by nature. What this means is that the course will be taught and assessed with varied educational vehicles to include: lecture notes, small group activities, labs, presentations, quizzes, tests and attendance.

**Text book: This course requires no text**

**Materials needed: 3-ring binder, OSHA approved safety glasses, calculator, and notebook.**

**Student Learning Outcomes**

**The student will be able to:**

**208-1 Articulate the concepts involved in the processing of biofuels and hydrocarbon compounds.**

**208-2 Use and apply a vocabulary base for each of the systems of study.**

**208-3 Apply and demonstrate the start up and shut down procedures of distillation processes.**

**208-4 Evaluate and participate in current distillation and refining technologies.**

**208-5 Classify and analyze the basics of hydrocarbon (organic) chemistry.**

**208-6 Differentiate the chemical processes involved in biofuel production.**

**208-7 Organize and differentiate basic flow diagrams related to biofuel facilities.**

**208-8 Evaluate and argue next generation biofuel technologies and feed stocks.**

**Assessments:**

* + **Laboratory experiments will be graded on an individual basis. Grade will include set up of the lab and corresponding paperwork.**
  + **Shop work, operation of equipment, construction of projects and safety.**
  + **Periodic class posts (wiki) and responses.**
  + **Class presentations (wiki)**
  + **Quizzes will be given throughout this course.**
  + **A course project will be constructed during the course and will be a capstone to the semester.**
  + **A final assessment will be given at the end of the course.**

**Attendance:**

In accordance with Lake Area Tech’s academic standards and the standards of your future employers, class participation and attendance is essential. Hands-on and lab experiences will not be able to be made up. If you must be gone, please email and/or call me. Our department adheres to a 3 point system for each day of class. The student will receive 3 points if on time. 2 points if tardy up to 15 minutes. 1 point if tardy up to one half hour and zero points if tardy past one half hour. Accumulative attendance is kept allowing for a maximum allowance of two hours per credit per class. Program hours, for all classes, are not to exceed twenty hours absent per semester.

**Academic Integrity:**

Cheating and plagiarism will not be tolerated. You cannot present the work of others as your own, whether it is on an exam or in a written assignment. The consequences of academic dishonesty include disciplinary probation to expulsion. In addition, you will likely receive a failing grade for the exam/assignment and possibly the course.

**ADA Statement:**

Students are entitled to ‘reasonable ‘accommodations’ under the provisions of the Americans with Disabilities Act. Those in need of such an accommodation should notify the instructor and make an appointment with the ADA compliance officer.

**Grading Scale:**

Final grades will utilize the following scale:

94%-100% = A

87%-93% = B

80%-86% = C

79% or less = Not passing

Grades are determined by your performance on quizzes, posts, responses, group presentations, exams, papers, lab performance, safety, your final project and attendance. There may be other grades throughout the duration of the class as well. There is NO Extra Credit.

**Other Technology:**

During class, cell phones, blackberries, ipods and other MP3 players must be turned off and put away unless you have discussed special circumstances with your instructor.

**Personal Responsibility:**

Please take responsibility for your learning. You earn your grades I do not give them to you. Make sure you that you seek help if you have questions. I want to help you be successful academically as you progress toward your desired career.

**Important Sites:**

http://eo-208-ethanol-and-bio-fuel-production.wikispaces.com/

**Note:  EO 208 Ethanol and Biofuels Production course is offered as part of the Energy Operation program.  All course content is subject to change by the instructor as deemed necessary. You may not record any of my class, its class members, or any content expressed without my permission.**

**The Instructor has the right to alter syllabus and assignments for this course. Any alterations will be announced to the students.**